

C12 b 21. (Amended) The method of claim 16, wherein [said] the mammal is a human.

C12 Sub p1 31. (Twice Amended) A method for treating or preventing bronchoconstriction in a human, which method comprises identifying a human in need of such treatment or prevention, and [causing said human to inhale] providing a therapeutically-effective amount of a nitric oxide-releasing compound to a human for inhalation.

C13 Sub p2 38. (Twice Amended) The method of claim 31, wherein said inhalation step is preceded by a step comprising [causing said human to inhale] providing a therapeutically-effective amount of gaseous nitric oxide to the human for inhalation.

C14 Sub p3 44. (Twice Amended) A method of improving gas exchange in the lungs of a mammal, said method comprising identifying a mammal in need of said improved gas exchange, and [causing said mammal to inhale] providing a therapeutically-effective amount of a nitric oxide-releasing compound to a mammal for inhalation.

C15 Sub p5 47. (Twice Amended) A method of delivering a pharmacoactive compound into the lungs of a mammal, said method comprising [causing said mammal to inhale] providing said compound in the form of a liquid or solid suspended in a gas comprising a therapeutically-effective amount of nitric oxide to a mammal for inhalation.

Sub 9

83. (Amended) An apparatus for introducing NO gas into the respiratory system of a mammal, comprising

- sources of pressurized NO gas, N₂ gas and O₂ gas;
- a gas reservoir;
- means for controllably releasing said gases into said gas reservoir, thereby forming a gas mixture within said reservoir; and
- a tube having a lumen in communication with said reservoir, said tube being equipped with a flowmeter, wherein said tube is configured to route said gas mixture into the respiratory system of a mammal;

provided that the setting on said flowmeter is such that the residence half time of NO in said reservoir during use by [said] such a mammal is 15 seconds or less.

Sub 10

87. (Amended) An apparatus for introducing NO gas into the respiratory system of a patient, comprising:

- a source of pressurized NO gas;
- an enclosure suitable for providing an ambient atmosphere from which [said] a patient can inhale;
- means for charging said atmosphere with NO from said source; and
- means for causing said atmosphere to have a high gas turnover rate.

52 94. (Amended) The apparatus of claim 92⁵¹ wherein said [ventilation] ventilation circuit comprises an NO₂ analyzer.

Sub D12

97. (Amended) An apparatus for introducing NO gas into the respiratory system of a mammal, comprising:

a source of pressurized NO gas;

a source of pressurized O₂-containing gas;

a housing equipped with a flowmeter; and

means for controllably releasing said gases from said sources into said housing to form a gas mixture; said housing being configured to route said gas mixture into the respiratory system of [said] a mammal.

Sub D13

104. (Amended) A method for treating or preventing reversible pulmonary vasoconstriction in a mammal, which method comprises

providing for inhalation by a mammal in need of said treatment or prevention a therapeutically-effective amount of an oxygen-containing gas mixture comprising NO at a therapeutically-effective concentration, [and

causing a mammal in need of said treatment to inhale a therapeutically-effective amount of said mixture,] provided that the NO₂ concentration in said gas mixture at the point of inhalation is less than 12 ppm.

105. (Amended) The method of claim 104, wherein said gas mixture contains less than 1 ppm NO₂ when inhaled by [said] the mammal.

bb 109. (Amended) The method of claim 104, wherein [said] ^{b1}
such a mammal has or is at risk of developing a clinical
condition selected from the group consisting of pneumonia,
traumatic injury, aspiration or inhalation injury, fat embolism
in the lung, acidosis, inflammation of the lung, adult
respiratory distress syndrome, acute mountain sickness, post
cardiac surgery acute pulmonary hypertension, persistent
pulmonary hypertension of the newborn, perinatal aspiration
syndrome, hyaline membrane disease, acute pulmonary
thromboembolism, acute pulmonary edema, heparin-protamine
reactions, sepsis, hypoxia, asthma, and status asthmaticus.

110. (Amended) A method for treating or preventing
reversible pulmonary vasoconstriction in a mammal, which method
comprises
 providing for inhalation by a mammal in need of said
treatment or prevention a therapeutically-effective amount of an
oxygen-containing gas mixture comprising NO at a therapeutically-
effective concentration; and
 monitoring the concentration of NO₂ in said gas mixture
prior to said inhalation[; and
 causing a mammal in need of said treatment to inhale a
therapeutically-effective amount of said gas mixture].

111. (Amended) The method of claim 110, wherein said
gas mixture contains less than 1 ppm NO₂ when inhaled by [said]
the mammal.

12 ~~114~~. (Amended) The method of claim ~~110~~^{b8}, wherein [said] the mammal has or is at risk of developing a clinical condition selected from the group consisting of pneumonia, traumatic injury, aspiration or inhalation injury, fat embolism in the lung, acidosis, inflammation of the lung, adult respiratory distress syndrome, acute mountain sickness, post cardiac surgery acute pulmonary hypertension, persistent pulmonary hypertension of the newborn, perinatal aspiration syndrome, hyaline membrane disease, acute pulmonary thromboembolism, acute pulmonary edema, heparin-protamine reactions, sepsis, hypoxia, asthma, and status asthmaticus.

14 ~~115~~. (Amended) A method for treating or preventing reversible pulmonary vasoconstriction in a mammal, which method comprises

providing an oxygen-containing gas mixture comprising NO at a therapeutically-effective concentration;

scavenging NO₂ from said gas mixture; and

after said scavenging step, [causing a mammal in need of said treatment to inhale] providing a therapeutically-effective amount of said [resulting] gas mixture for inhalation by a mammal in need of said treatment or prevention.

15 ~~116~~. (Amended) The method of claim ~~115~~¹⁴, wherein said gas mixture contains less than 1 ppm NO₂ when inhaled by [said] the mammal.

78 119. (Amended) The method of claim 115, wherein [said] ⁷⁴
the mammal has or is at risk of developing a clinical condition
selected from the group consisting of pneumonia, traumatic
injury, aspiration or inhalation injury, fat embolism in the
lung, acidosis, inflammation of the lung, adult respiratory
distress syndrome, acute mountain sickness, post cardiac surgery
acute pulmonary hypertension, persistent pulmonary hypertension
of the newborn, perinatal aspiration syndrome, hyaline membrane
disease, acute pulmonary thromboembolism, acute pulmonary edema,
heparin-protamine reactions, sepsis, hypoxia, asthma, and status
asthmaticus.

Sub 18 120. (Amended) A method for treating or preventing
bronchoconstriction in a mammal, which method comprises
providing for inhalation by a mammal in need of said
treatment or prevention a therapeutically effective amount of an
oxygen-containing gas mixture comprising NO at a therapeutically-
effective concentration, [and
causing a mammal in need of said treatment to inhale a
therapeutically-effective amount of said mixture,] provided that
the NO₂ concentration in said gas mixture at the point of
inhalation is less than 12 ppm.

81 121. (Amended) The method of claim ⁸⁰120, wherein said
gas mixture contains less than 1 ppm NO₂ when inhaled by [said]
the mammal.

Sub 20

124. (Amended) A method for treating or preventing bronchoconstriction in a mammal, which method comprises providing for inhalation by a mammal in need of said treatment or prevention a therapeutically-effective amount of an oxygen-containing gas mixture comprising NO at a therapeutically-effective concentration; and monitoring the concentration of NO₂ in said gas mixture prior to said inhalation; and causing a mammal in need of said treatment to inhale a therapeutically-effective amount of said gas mixture].

125. (Amended) The method of claim 124, wherein said gas mixture contains less than 1 ppm NO₂ when inhaled by [said] the mammal.

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127. (Amended) A method for treating or preventing bronchoconstriction in a mammal, which method comprises providing an oxygen-containing gas mixture comprising NO at a therapeutically-effective concentration; scavenging NO₂ from said gas mixture; and after said scavenging step, [causing a mammal in need of said treatment to inhale] providing a therapeutically-effective amount of said [resulting] gas mixture for inhalation by a mammal in need of said treatment or prevention.

128. (Amended) The method of claim 127, wherein said gas mixture contains less than 1 ppm NO₂ when inhaled by [said] the mammal.

129. (Amended) The method of claim 128, wherein [said] the mammal is a human.

130. (Amended) The method of claim 129, wherein [said] the mammal is a human.

131. (Amended) The method of claim 130, wherein [said] the mammal is a human.

132. (Amended) The method of claim 131, wherein [said] the mammal is a human.

133. (Amended) The method of claim 132, wherein [said] the mammal is a human.

REMARKS

Claims 16-21, 31-36, 38, 44-58 and 69-134 are pending in the application. Several of these claims are amended above in accordance with the Examiner's suggestions, in order to clarify what Applicants consider to be the invention. In addition, typographical errors in claim 94 and the specification have been corrected and the reference to "Fig. 5" in the specification amended to read "Figs. 5a and 5b". No new matter has been added.